

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark E. Wilinski (Reg. No. 63,230) on November 10, 2010.

The application has been amended as follows:

Please Amend Claims as follows:

1 (Examiner Amended): A method for measuring quality of service at an application level in a telecommunication network, the method comprising:
~~monitoring operation of an application by a monitoring apparatus through a network interface including:~~
~~monitoring the network interface for data packets; receiving, at the monitoring apparatus, a data packet associated with the operation of the application as the data packet is being transmitted between two network nodes through the network interface,~~
~~wherein the two network nodes are different from the monitoring apparatus, and~~
~~filtering the received data packet; and~~
~~storing network data including the filtered data packet in a buffer of the monitoring apparatus, wherein the network data is indicative of a behavior of the network;~~

transmitting the stored network data to a remote network entity_ for analysis of the stored network data at the remote network entity;
subsequent to transmitting the stored network data to the remote network entity,
receiving a trigger signal at the monitoring apparatus from a—the remote network entity
in response to a critical situation corresponding to the quality of service of the
application, wherein the remote network entity is different from the two network nodes;
and
in response to receiving the trigger signal, transmitting, from the monitoring apparatus,
the stored network data to a remote network archive associated with the remote
network entity, wherein the remote network archive is different from the buffer of the
monitoring apparatus.

monitoring operation of an application by a monitoring apparatus through
a network interface including:

monitoring the network interface for data packets transmitted
between two network nodes different from the monitoring
apparatus;

receive a data packet as the data packet is being transmitted
between the two network nodes;

filtering the received data packet ;

storing network data including the filtered data packet in a buffer of the
monitoring apparatus.

transmitting said network data to at least one measuring and signaling apparatus for analysis of the network data at the at least one measuring and signaling apparatus;

detecting a critical situation related to said quality of service, by the at least one measuring and signaling apparatus which is separate from the monitoring apparatus and the two network nodes;

generating, in response to said critical situation, a trigger signal subsequent to said monitoring apparatus transmitting said network data, by the at least one measuring and signaling apparatus;

receiving said trigger signal at a coordination apparatus separate from the monitoring apparatus and the at least one measuring and signaling apparatus;

transmitting, by the coordination apparatus, said trigger signal to said monitoring apparatus; and

in response to the generation of said trigger signal, collecting by an archive apparatus, said data packet stored in said buffer of said monitoring apparatus, wherein the data packet is indicative of a behavior of the telecommunication network.

3 (Examiner Amended): The method of claim 1, further comprising measuring the quality of service based on the network data in a synchronized fashion with at least one other monitoring apparatus.

4 (Amended): The method of claim 1, wherein the archive apparatus is configured to store data from a plurality of monitoring apparatuses.

5 (Examiner Cancelled)

6 (Examiner Amended): The method of claim 1, further comprising: associating an ~~activation~~ a testing function configured to test the operation of the application to a ~~control~~ measuring and signaling function configured to detect the critical situation relating to the quality of service.

7 (Examiner Amended): The method of claim 6, wherein the ~~activation~~ testing function and said ~~control~~ measuring and signaling function co-operate with each other according to an agent/server configuration, in which said ~~activation~~ testing function acts as an agent and said ~~control~~ measuring and signaling function acts as a server.

10 (Examiner Amended): The method of claim 1, wherein at least one of the trigger signal and the data packet indicative of the behavior of the network is transmitted through a direct transmission channel.

12 (Examiner Amended): The method of claim 1, wherein the monitoring apparatus is further configured to intercept said trigger signal transmitted on said telecommunication network.

13 (Examiner Amended): A system for measuring ~~the~~ quality of service at an application level in a telecommunication network, the system comprising:

at least one ~~activating~~ testing apparatus configured to carry out sessions at the application level on said telecommunication network ~~(N)~~,

at least one monitoring apparatus configured to:

monitor a network interface for data packets transmitted between two network nodes different from the at least one monitoring apparatus;

receive a data packet as the data packet is being transmitted between the two network nodes;

filter the received data packet; ;

store the filtered data packet in a buffer of the at least one monitoring apparatus; and

transmit said data packet to at least one ~~testing measuring and signaling~~ apparatus for analysis of the data packet at the at least one testing measuring and signaling apparatus;

the at least one testing measuring and signaling apparatus, separate from the at least one monitoring apparatus and the two network nodes, configured to:

detect a critical situation related to said quality of service; ; and

generate, in response to said critical situation, a trigger signal subsequent to said at least one monitoring apparatus transmitting said data packet; ~~and~~ ;

~~transmit the trigger signal to the at least one monitoring apparatus; and~~

a coordination apparatus separate from the at least one monitoring apparatus and the at least one measuring and signaling apparatus, wherein the coordination apparatus is configured to:

receive said trigger signal from said at least one measuring and signaling apparatus; and

transmit said trigger signal to said at least one monitoring apparatus;
~~a collecting an archive~~ apparatus configured to collect, in response to the generation of said trigger signal, said data packet stored in said at least one monitoring apparatus, wherein the data packet is indicative of a behavior of the telecommunication network.

14 (Examiner Amended): The system of claim 13, further comprising a plurality of monitoring apparatuses configured to measure and store data indicative of the behavior of the telecommunication network.

15 (Examiner Amended): The system of claim 14, further comprising a plurality of synchronization modules associated with said plurality of monitoring apparatuses to measure said data indicative of the behavior of said telecommunication network (~~N~~) in a synchronized fashion.

16 (Examiner Amended): The system of claim 13, wherein the at least one monitoring apparatus further comprises:

a memory configured to store data indicative of the behavior of said telecommunication network, wherein the data includes the filtered data packet, and
a transmission module configured to transmit said data indicative of the behavior of said telecommunication network to said ~~collecting~~ archive apparatus in response to receiving said trigger signal.

17 (Examiner Cancelled)

18 (Examiner Amended): The system of claim 13, wherein the at least one ~~activating~~ testing apparatus and said at least one ~~testing~~ measuring and signaling apparatus mutually co-operate according to a general agent/server configuration, in which said ~~activating~~ testing apparatus acts as agent and said ~~verification~~ measuring and signaling apparatus acts as server.

32 (Examiner Amended): ~~One or more~~ A non-transitory computer readable media storing computer readable instructions that, when executed, cause an a monitoring apparatus to:
~~monitor operation of an application through a network interface; including: monitoring the network interface for data packets; receiving, at the monitoring apparatus, a data packet associated with the operation of the application as the data packet is being transmitted between two network nodes through the network interface, wherein the two network nodes are separate from the monitoring apparatus, and~~

filtering the received data packet;

store network data including the filtered data packet a buffer of the apparatus, wherein the network data is indicative of a behavior of the network;

transmit the stored network data to a remote network entity for analysis of the stored network data at the remote network entity;

subsequent to transmitting the stored network data to the remote network entity, receive a trigger signal from a the remote network entity in response to a critical situation corresponding to quality of service of the application, wherein the remote network entity is separate from the two network nodes and the monitoring apparatus; and in response to receiving the trigger signal, transmit the stored network data to a remote network archive associated with the remote network entity, wherein the remote network archive is different from the buffer of the apparatus.

monitor operation of an application through a network interface;

monitor the network interface for data packets transmitted between two network nodes different from the at least one monitoring apparatus;

receive a data packet as the data packet is being transmitted between the two network nodes;

filter the received data packet ;

store the filtered data packet in a buffer of the at least one monitoring apparatus, and

transmit said data packet to at least one measuring and signaling apparatus for analysis of the data packet at the at least one measuring and

signaling apparatus;

the at least one measuring and signaling apparatus, separate from the at least one monitoring apparatus and the two network nodes, configured to:

detect a critical situation related to said quality of service;

generate, in response to said critical situation, a trigger signal subsequent to said at least one monitoring apparatus transmitting said data packet;
a coordination apparatus separate from the at least one monitoring apparatus and the at least one measuring and signaling apparatus, wherein the coordination apparatus is configured to:

receive said trigger signal from said at least one measuring and signaling apparatus, and

transmit said trigger signal to said at least one monitoring apparatus;
an archive apparatus configured to collect, in response to the generation of said trigger signal, said data packet stored in said at least one monitoring apparatus, wherein the data packet is indicative of a behavior of the telecommunication network.

33 (Examiner Amended): The ~~one or more~~ non-transitory computer readable media of claim 32, ~~wherein the apparatus is a monitoring apparatus and~~ wherein the critical situation is detected based on data from a plurality of monitoring apparatuses.

34 (Examiner Amended): The ~~one or more~~ non-transitory computer readable media of

claim 32, wherein the computer readable instructions, when executed, ~~further cause~~ causes the monitoring apparatus to measure the data indicative of the behavior of said telecommunication network in a synchronized fashion with at least one other monitoring apparatus in the telecommunication network.

35 (Examiner Amended): The ~~one or more~~ non-transitory computer readable media of claim 32, wherein the archive apparatus is a centralized archive which stores ~~storing~~ data from a plurality of ~~network~~ monitoring apparatuses.

36-39 (Examiner Cancelled)

Reasons For Allowance

2. The prior arts of record do not disclose the amended limitations of claims 1, 13, and 32. In particular, the prior arts of record do not disclose a coordination apparatus separate from at least one monitoring apparatus and at least one measuring and signaling apparatus that receives a trigger signal from a measuring and signaling apparatus and transmits the trigger signal to at least one monitoring apparatus;

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ESTHER BENOIT whose telephone number is (571)270-3807. The examiner can normally be reached on Monday through Friday between 7:30 a.m and 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Krista M. Zele can be reached on 571-272-7288. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

E.B
November 16, 2010

/Krista M. Zele/
Supervisory Patent Examiner, Art Unit 2453